

Abstract

A optical Biopsy method and an apparatus are used in the diagnosis of precancerous lesion for locating the place and determining the level of malignant tumor. The apparatus comprises light source (1, 10) a light channel system, an endoscope (21) and a circuit system. The light sources include an excited light (1) and a cold light source (10). The cold light source and the excited light in the light channel system go through the end of the light guide of the endoscope via optical fiber bundle and irradiate the tested living tissue (22). The white light image signal and the intrinsic fluorescence image signal reflected from the tested living tissue (22) are received by a weak fluorescence CCD (6) that tightly connects to the end of the endoscope (21) and then transmit to the circuit system via a signal wire (9) to produce the image in the display (17). The weak fluorescence signal reflected from the tested living tissue (22) is transmitted to the circuit system via the weak fluorescence fiber bundle (4) protruding from the forceps hole of the endoscope to produce the spectrum image (16).

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局



(43) 国际公布日:
2004年5月13日(13.05.2004)

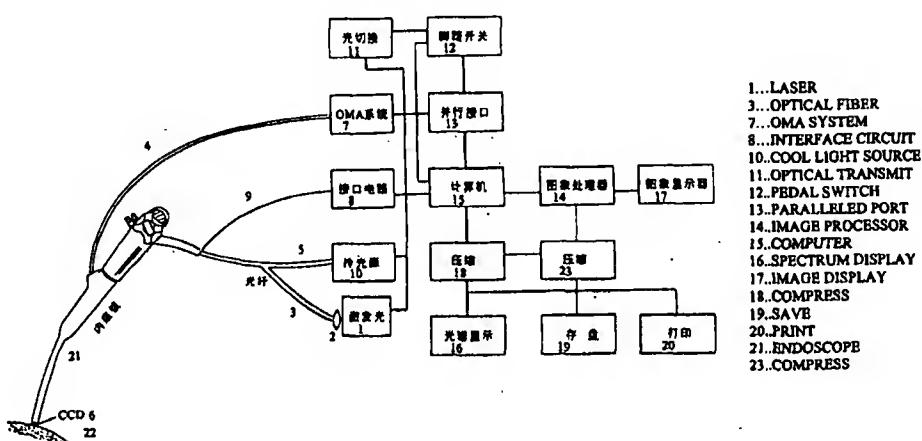
PCT

(10) 国际公布号:
WO 2004/039254 A1

- (51) 国际分类号⁷: A61B 5/00, G01N 21/64
- (21) 国际申请号: PCT/CN2003/000917
- (22) 国际申请日: 2003年10月29日(29.10.2003)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权: 02137764.2 2002年10月31日(31.10.2002) CN
- (71) 申请人(对除美国以外的所有指定国): 上海生标科技有限公司(SHANGHAI SHENGBIAO SCIENCE AND TECHNOLOGY CO., LTD.) [CN/CN]; 中国上海市钦州路168号1003室, Shanghai 200233 (CN).
- (72) 发明人及
(75) 发明人/申请人(仅对美国): 曾堃(ZENG, Kun) [CN/CN]; 虞震芬(YU, Zhenfen) [CN/CN]; 中国上海市钦州路168号1003室, Shanghai 200233 (CN).
- (74) 代理人: 上海专利商标事务所(SHANGHAI PATENT & TRADEMARK LAW OFFICE); 中国上海市桂平路435号, Shanghai 200233 (CN).
- (81) 指定国(国家): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE,
- (DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW)
- (84) 指定国(地区): ARIPO专利(GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚专利(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利(AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI专利(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- 根据细则4.17的声明:
— 关于申请人在国际申请日有权申请并被授予专利(细则4.17(l))对除美国以外的所有指定国
— 发明人资格(细则4.17(iv))仅对美国
- 本国际公布:
— 包括国际检索报告。
- 所引用双字母代码和其它缩写符号, 请参考刊登在每期PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: A LASER-INDUCED FLUORESCENCE METHOD FOR PRECANCEROUS LESION DIAGNOSIS AND AN ENDOSCOPE PRECANCEROUS LESION DIAGNOSIS APPARATUS THEREOF

(54) 发明名称: 诊断癌前病变的光活检方法和使用该方法的内窥镜诊断癌前病变的装置



WO 2004/039254 A1

(57) Abstract: A laser-induced fluorescence (LIF) method and an apparatus are used in the diagnosis of precancerous lesion for locating the place and determining the level of malignant tumor. The apparatus comprises light sources (1,10) a light channel system, an endoscope (21) and a circuit system. The light sources include an excited light (1) and a cold light source (10), the cold light source and the excited light in the light channel system go through the end of the light guide of the endoscope via optical fiber bundle and irradiate the tested living tissue (22). The white light image signal and the intrinsic fluorescence image signal reflected from the tested living tissue (22) are received by a weak fluorescence CCD (6) that tightly connects to the end of the endoscope (21) and then transmit to the circuit system via a signal wire (9) to produce the image in the display (17). The weak fluorescence signal reflected from the tested living tissue (22) is transmitted to the circuit system via the weak fluorescence fiber bundle (4) protruding from the forceps hole of the endoscope to produce the spectrum image (16). [见续页]